

Gastropods from Camamu Bay, state of Bahia, Brazil

Thailla Macedo da S. Ourives^{1*}, Maria C. Guerrazzi² and Luiz Ricardo L. Simone³

1 Universidade Estadual de Santa Cruz, Programa de Pós-Graduação em Sistemas Aquáticos Tropicais. CEP 45650-900. Ilhéus, BA, Brasil.

2 Universidade Estadual do Sudoeste da Bahia, Departamento de Ciências Biológicas. CEP 45206-190. Jequié, BA, Brasil.

3 Museu de Zoologia da Universidade de São Paulo. Cx. Postal 42494. CEP 04299-970. São Paulo, SP, Brasil.

* Corresponding author. E-mail: thaillaourives@gmail.com

ABSTRACT: The present study provides a species list of marine and estuarine gastropods from Camamu Bay, in the state of Bahia, northeastern Brazil. Expeditions to collect mollusks were carried out between 2003 and 2006 in Acaraí River estuary, using a trawling boat with otter trawl. A total of 3,193 gastropod specimens were identified, belonging to 46 families, comprising 94 species. Amongst the recorded species, all represent the first occurrence to Camamu Bay and four to the state of Bahia (genera *Littoridina*, *Morula* and the species *Cadlina rumia* and *Polystira albida*).

INTRODUCTION

Mollusks are the second largest animal group, being outnumbered only by arthropods. The estimated number of species around the world ranges from 80,000 to 120,000, being 1,600 species reported for Brazilian coast (Simone 1999).

In spite of their commercial importance and the studies about utilization of gastropods as bioindicators of the environmental quality (Koide *et al.* 1982; Szefer 1986; Hamed and Emara 2006; Silva *et al.* 2006) and in the biosynthesis of pharmaceutical compounds (Faulkner 1994; Manzo *et al.* 2005; Oliveira 2006), a few researches have focused the biological aspects of these animals and our knowledge about them still depends on further studies (Simone 1999).

The Camamu Bay in the state of Bahia, Brazil, is characterized by a remarkable diversity of poorly studied ecosystems, such as large mangrove coverage, coastal coral reefs, restingas and Atlantic rainforest. Despite of its richness, little is known about the fauna and flora composition. A recent diagnosis of the Brazilian coastal and marine biodiversity (Ministério do Meio Ambiente 2002) placed this bay as an interesting region for the conservation of estuaries and mangroves. In a broad sense, Gray (2001) points out the necessity of studies about the species richness in coastal areas in South America that can help in the identification of global patterns.

Therefore, the goal of the present study was to assess the composition of the gastropod mollusks community in Camamu Bay, in order to increase the information about their occurrence in Bahia. Moreover, the results from this inventory provide subsidies to further biological and ecologic studies in this community.

MATERIALS AND METHODS

Study Site

Camamu Bay is located in the maritime coastal zone named "Costa do Dendê". It is situated in the south coastal

region of Bahia, Brazil, being regarded as the third largest bay in the country, intern area with 85 km² (Oliveira *et al.* 1998). The confluence between Maraú, Conduru, Acaraí, Pinaré, Igrapiúna and Serinhaém rivers with the Atlantic Ocean form the lagoon estuarine area of this geographic landform (Figure 1).

The climate in the region is predominantly warm and humid, without a dry season. The relative humidity is high, with annual mean values ranging from 75% to 85%. The average mean temperature is 24 °C, with moderate changes, being the highest temperature equal to 26 °C and the coldest equal to 20 °C (Oliveira *et al.* 2002).

Data Collection

The sample collections were carried out between July 2003 and September 2006, in eight fixed points, comprising 16 months as a part of the project "Inventory of the Benthic Macrofauna and Ichthyofauna of Camamu Bay - BA", coordinated by the Universidade Estadual do Sudoeste da Bahia (UESB), Jequié campus, Bahia, Brazil.

The samples of gastropod mollusks were collected on unconsolidated substrate using a trawling boat with one or more parallels trawls kept apart horizontally by otter boards with 3 cm of net mesh size and a 4 m mouth. In each collection point, the trawling lasted about 10 minutes. According to preliminary samplings, this time period was sufficient to provide representative specimens of the estuarine malacofauna.

Data Analyses

The specimens were identified and classified according to Rios (2009). The examined material and organism distribution were cited for each species. In the item "examined material", we included in parentheses the total number of analyzed specimens (n), as well as the collection site (St.), collect date (C) and number of examples [n], being: St.1: 13°53'04" S, 38°57'06" W; St.2: 13°53'21" S, 38°57'49" W; St.3: 13°54'25" S, 38°59'14" W; St.4:

13°54'06" S, 39°00'22" W; St.5: 13°54'14" S, 39°00'34" W; St.6: 13°55'21" S, 39°02'13" W; St.7: 13°56'19" S, 39°03'57" W; St.8: 13°56'24" S, 39°05'04" W; C01 (13/iv/2003); C02 (13/vii/2003); C03 (13/ix/2003); C04 (23/iii/2004); C05 (24/iv/2004); C06 (12/vi/2004); C07 (13/vii/2004); C08 (29/viii/2004); C09 (26/ix/2004); C10 (30/x/2004); C11 (18/xii/2004); C12 (24/iii/2005); C13 (6/vii/2005); C14 (6/viii/2005); C15 (7/ix/2005); C16 (11/ix/2006).

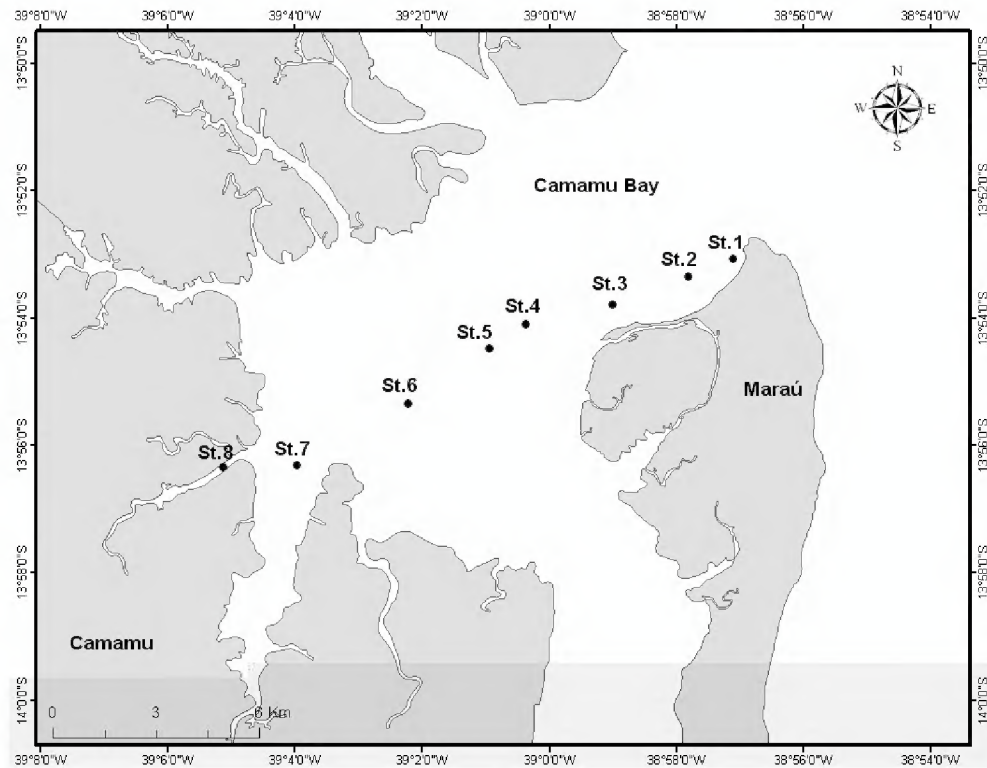


FIGURE 1. Map of study area indicating the sampling stations (St1 - St8) along the Camamu Bay, state of Bahia, Brazil.

RESULTS AND DISCUSSION

Along the 16 sampled months, a total of 3,193 individuals were collected, comprising 94 species distributed into 46 families of gastropods:

Subclass Prosobranchia M. Edwards, 1848

Order Archaeogastropoda Thiele, 1925

Superfamily Fissurelloidea Fleming, 1822

Family Fissurellidae Fleming, 1822

Lucapinella sp.

Examined material: (n= 5). St.5, UESB 3, C14 [3]; St.5, UESB M31, C03 [1]; St.2, UESB M456, C16 [1].

Superfamily Trochoidea Rafinesque, 1815

Family Trochidae Rafinesque, 1815

Calliostoma sp.

Examined material: (n= 8). St.5, UESB 102, C14 [1]; St.4, UESB M397, C14[1]; St.5, UESB M277, C08[1]; St.6, UESB M14, C02 [1]; St.6, UESB M40/7, C03 [1]; St.2, UESB M189, C09[1]; St.1, UESB M118, C06[1]; St.1, UESB M58, C05 [1].

Family Turbinidae Rafinesque, 1815

Astraea latispina (Philippi, 1844)

Examined material: (n= 1). St.1, UESB M322, C05 [1].

Distribution: Western Atlantic: Brazil (Ceará to Santa Catarina) (Rios, 2009).

Astraea olfersii (Philippi, 1846)

Examined material: (n= 1). St.1, UESB M390, C14 [1].

Distribution: Western Atlantic: Brazil (Rio Grande do Norte to Santa Catarina) (Rios 2009).

Astraea sp.

Examined material: (n= 1). St.5, UESB M409, C16 [1].

Family Tricoliidae Robertson, 1958

Tricolia affinis (C.B. Adams, 1850)

Examined material: (n= 1295). St.1, UESB 157, C11 [1]; St.1, UESB 188, C14 [4]; St.1, UESB 201, C14 [1]; St.1, UESB 218, C11 [1]; St.1, UESB 20, C11 [1]; St.2, UESB 50, C11 [5]; St.4, UESB 54, C08 [1]; St.4, UESB 105, C14 [1]; St.1, MZUSP 61735, C14 [20]; St.1, MZUSP 61776, C14 [26]; St.4, MZUSP 61795, C15 [1]; St.5, MZUSP 62078, C11 [1]; St.1, MZUSP 62092, C11 [300]; St.1, UESB M401, C15 [123]; St.1, UESB M320, C09 [2]; St.4, UESB M322, C11 [2]; St.1, UESB M321, C10 [10]; St.1, UESB M324, C12 [108]; St.1, UESB M325, C11 [99]; St.1, UESB M326, C12 [97]; St.1, UESB M333, C05 [5]; St.1, UESB M283, C04 [25]; St.1, UESB M289, C12 [33]; St.1, UESB M293, C11 [56]; St.1, UESB M301, C08 [2]; St.1, UESB M311, C05 [18]; St.5, UESB M479, C09 [28]; St.1, UESB M165, C09 [29]; St.2, UESB M184, C09 [5]; St.3, UESB M136, C06 [2]; St.1, UESB M122, C06 [61]; St.1, UESB M85, C05 [37]; St.2, UESB M55, C05 [1]; St.1, UESB M62, C05 [1]; St.7, UESB M239, C07 [19]; St.1, UESB M432, C09 [4]; St.1, UESB M442, C15 [77]; St.1, UESB M443, C14 [73]; St.3, UESB M450, C15 [2].

Distribution: Western Atlantic: Florida to Brazil (Paraná) (Gomes *et al.* 2006; Rios 2009).

Tricolia bella (M. Smith, 1937)

Examined material: (n= 8). St.4, UESB 150, C15 [1]; St.1, UESB 208, C12 [1]; St.1, UESB 217, C11 [1]; St.1, UESB 10, C12 [1]; St.1, MZUSP 61741, C10 [1]; St.1, UESB M114, C06 [2]; St.5, UESB M411, C14 [1].

Distribution: Western Atlantic: Florida to Brazil (Rio de Janeiro) (Rios 2009).

Suborder Neritimorpha Golikov and Starobogatov, 1975

Superfamily Neritoidea Rafinesque, 1815

Family Neritidae Rafinesque, 1815

Neritina virginea (Linnaeus, 1758).

Examined material: (n= 383). St.8, MZUSP 61782, C14 [2]; St.7, UESB M354, C15 [5]; St.7, UESB M372, C15 [11]; St.8, UESB M377, C15 [17]; St.8, UESB M383, C14 [1]; St.8, UESB M402, C15 [1]; St.3, UESB M300, C04 [1]; St.8, UESB M305, C12 [3]; St.8, UESB M23, C03 [67]; St.6, UESB M35 C03 [4]; St.7, UESB M40/1, C03 [1]; St.8, UESB M480, C09 [27]; St.8, UESB M493, C10 [3]; St.8, UESB M176, C09 [21]; St.8, UESB M177, C09 [55]; St.8, UESB M182, C09 [27]; St.8, UESB M185, C09 [4]; St.7, UESB M192, C09 [2]; St.7, UESB M193, C09 [4]; St.8, UESB M10, C02 [8]; St.8, UESB M142, C08 [23]; St.5, UESB M150, C08 [16]; St.7, UESB M134, C06 [12]; St.8, UESB M88, C06 [7]; St.1, UESB M109,

C06 [1]; St.7, UESB M121, C06 [2]; St.8, UESB M69, C05 [1]; St.4, UESB M466, C10 [1]; St.8, UESB M468, C10 [2]; St.8, UESB M474, C11 [7]; St.7, UESB M475, C11 [1]; St.7, UESB M242, C11 [1]; St.7, UESB M244, C11 [1]; St.8, UESB M246, C11 [6]; St.8, UESB M248, C11 [2]; St.8, UESB M45, C05 [1]; St.8, UESB M212, C10 [3]; St.8, UESB M214, C12 [3]; St.8, UESB M219, C10 [2]; St.4, UESB M227, C10 [1]; St.8, UESB M267, C12 [6]; St.8, UESB M410, C16 [12]; St.8, UESB M415, C16 [8].

Distribution: North Carolina to Brazil (Santa Catarina) (Rios 2009).

Neritina sp.

Examined material: (n= 1). St.7, MZUSP 62596, C09 [1].

Order Mesogastropoda Thiele, 1925

Family Littorinidae Gray, 1840

Littorina angulifera (Lamarck, 1822)

Examined material: (n= 2). St.7, UESB M156, C08 [1]; St.1, UESB M95, C06 [1].

Distribution: Western Atlantic: Florida to Brazil (São Paulo); Trindade and Abrolhos Islands. Introduced in Pacific Panamá (Rios 2009).

Superfamily Rissoidae Gray, 1847

Family Hydrobiidae Troschel, 1857

Littoridina sp.

Examined material: (n= 1). St.5, MZUSP 62075, C15 [1].

Family Rissoidae Gray, 1847

Rissoina bryerea (Montagu, 1803)

Examined material: (n= 3). St.1, UESB 187, C15 [1]; St.1, MZUSP 61802, C14 [1]; St.2, UESB 204, C16 [1].

Distribution: Western Atlantic: Florida to Brazil (Santa Catarina) (Rios 2009).

Rissoina sp.

Examined material: (n= 1). 1, C11, St.1, UESB 21.

Superfamily Cerithioidea Fleming, 1822

Family Modulidae Fischer, 1884

Modulus modulus (Linnaeus, 1758)

Examined material: (n= 2). St.1, UESB M89, C06 [1]; St.5, UESB M116, C06 [1].

Distribution: Western Atlantic: Bermuda, North Carolina to Brazil (Santa Catarina) (Rios 2009).

Family Cerithiidae Fleming, 1822

Cerithium atratum (Born, 1778)

Examined material: (n= 70). St.4, UESB 125, C12 [1]; St.7, UESB 128, C05 [1]; St.4, UESB 130, C15 [2]; St.1, UESB 131, C15 [2]; St.4, UESB 135, C11 [1]; St.4, UESB 138, C11 [1]; St.1, UESB 145, C12 [1]; St.7, UESB 149, C10 [1]; St.1, UESB

156, C11 [1]; St.5, UESB 158, C06 [1]; St.7, UESB 160, C05 [3]; St.4, UESB 161, C05 [1]; St.7, UESB 165, C06 [2]; 1, C11, St.1, UESB 167); St.4, UESB 172, C11 [1]; St.4, UESB 177, C11 [1]; St.7, UESB 200, C15 [2]; St.7, UESB 203, C15 [3]; St.4, UESB 76, C15 [6]; St.3, UESB 117, C08 [1]; St.1, UESB M395, C14 [1]; St.1, UESB M400, C15 [1]; St.1, UESB M328, C12 [1]; St.7, UESB M340, C09 [1]; St.4, UESB M275, C11 [2]; St.4, UESB M279, C09 [1]; St.5, UESB M17, C03 [3]; St.4, UESB M40, C03 [2]; St.4, UESB M171, C09 [2]; St.2, UESB M173, C09 [1]; St.1, UESB M158, C08 [1]; St.6, UESB M152, C08 [1]; St.5, UESB M91, C06 [1]; St.6, UESB M101, C06 [3]; St.1, UESB M110, C06 [7]; St.4, UESB M68, C05 [1]; St.7, UESB M79, C05 [2]; St.7, UESB M81, C05 [1]; St.7, UESB M236, C07 [2]; St.3, UESB M448, C15 [1]; St.2, UESB M454, C16 [2].

Distribution: Western Atlantic: North Carolina to Brazil (Santa Catarina) (Rios 2009).

Bittium varium (Pfeiffer, 1840)

Examined material: (n= 335). St.1, UESB 129, C15 [11]; St.4, UESB 141, C11 [1]; St.1, UESB 159, C09 [1]; St.1, UESB 163, C04 [3]; St.4, UESB 170, C15 [1]; St.5, UESB 171, C10 [1]; St.1, UESB 180, C15 [3]; St.1, UESB 189, C14 [1]; St.1, UESB 190, C14 [6]; St.1, UESB 192, C14 [2]; St.1, UESB 210, C10 [1]; St.4, UESB 216, C11 [1]; St.1, UESB 222, C11 [86]; St.1, UESB 6, C12 [33]; St.1, UESB 8, C12 [2]; St.1, UESB 14, C11 [4]; St.1, UESB 16, C11 [1]; St.2, UESB 53, C11 [4]; St.1, UESB 68, C12 [47]; St.1, UESB 91, C08 [1]; St.4, UESB 118, C13 [1]; St.4, UESB 119, C13 [1]; St.1, UESB 120, C12 [61]; St.4, MZUSP 61733, C15 [4]; St.1, MZUSP 62080, C11 [30]; St.1, UESB 203, C09 [1]; St.1, UESB M334, C05 [1]; St.1, UESB M312, C05 [6]; St.2, UESB M169, C09 [3]; St.1, UESB M99, C06 [5]; St.6, UESB M73, C05 [1]; St.1, UESB M63, C05 [1]; St.1, UESB M434, C09 [2]; St.1, UESB M438, C15 [2]; St.1, UESB M464, C12 [24].

Distribution: Western Atlantic: North Carolina to Brazil (Santa Catarina) (Rios 2009).

Litiopa sp.

Examined material: (n= 1). St.1, UESB M404, C14 [1].

Alaba incerta (Orbigny, 1842)

Examined material: (n= 147). St.1, UESB 46, C11 [11]; St.1, UESB 47, C12 [13]; St.1, UESB 49, C12 [1]; St.1, UESB 11, C12 [9]; St.1, UESB 17, C11 [7]; St.1, UESB 18, C11 [1]; St.1, UESB 70, C12 [63]; St.1, UESB 74, C04 [1]; St.1, UESB 96, C14 [1]; St.1, UESB 121, C12 [2]; St.1, UESB M314, C05 [3]; St.7, UESB M139, C06 [1]; St.1, UESB M90, C06 [17]; St.1, UESB M67, C05 [12]; St.2, UESB M71, C05 [1]; St.1, UESB M435, C09 [2]; St.1, UESB M440, C15 [1]; St.3, UESB M449, C15 [1].

Distribution: Western Atlantic: Bermuda, Florida to Brazil (São Paulo) (Rios 2009).

Alaba sp.

Examined material: (n= 144). St.1, UESB 164, C09 [2]; St.1, UESB 179, C15 [3]; St.1, MZUSP 61719, C14 [4]; St.1, MZUSP 61757, C14 [17]; St.1, MZUSP 61780, C09 [5]; St.1, MZUSP 61796, C10 [1]; St.1, MZUSP 62079, C11 [1]; St.1, MZUSP 62089, C15 [11]; St.1, MZUSP 62093, C11 [100].

Family Diastomatidae Cossmann, 1893*Finella dubia* (d'Orbigny, 1842)*Examined material:* (n= 1). St.5, UESB 214, C14 [1].*Distribution:* Western Atlantic: North Carolina to Brazil (Santa Catarina) (Rios 2009).*Finella* sp.*Examined material:* (n= 7). St.1, MZUSP 61727, C04 [5]; St.1, MZUSP 61749, C10 [2].**Superfamily Vermetoidea Rafinesque, 1815****Family Vermetidae Rafinesque, 1815***Strombus pugilis* Linnaeus, 1758*Examined material:* (n= 19). St.4, UESB 186, C15 [1]; St.2, UESB 75, C15 [1]; St.7, UESB M350, C15 [1]; St.5, UESB M361, C14 [1]; St.4, UESB M336, C10 [1]; St.1, UESB M337, C11 [1]; St.4, UESB M19, C03 [2]; St.5, UESB M20, C03 [3]; St.4, UESB M509, C10 [1]; St.5, UESB M126, C06 [1]; St.3, UESB M51, C05 [1]; St.4, UESB M200, C10 [1]; St.5, UESB M252, C12 [1]; St.4, UESB M253, C12 [1]; St.7, UESB M254, C12 [1]; St.5, UESB M408, C16 [1].*Distribution:* Western Atlantic: North Carolina to Brazil (Santa Catarina) (Rios 2009).*Strombus gallus* Linnaeus, 1758*Examined material:* (n= 1). St. 5, UESB M40/4, C03 [1].*Distribution:* Western Atlantic: Bermuda, Florida to Brazil (Espírito Santo) (Rios 2009).**Superfamily Crepiduloidea Fleming, 1822****Family Calyptraeidae Lamarck, 1809***Crepidula* sp.*Examined material:* (n= 9). St. 4, UESB 140, C11 [1]; St.5, MZUSP 61713, C14 [7]; St.4, UESB 209, C16 [1].**Superfamily Cypraeoidea Rafinesque, 1815****Family Triviidae Troschel, 1863***Trivia pediculus* (Linnaeus, 1758)*Examined material:* (n= 1). St. 4, UESB M262, C12 [1].*Distribution:* Western Atlantic: Bermuda, North Carolina to Brazil (São Paulo) (Rios 2009).**Family Lamellariidae Orbigny, 1841***Lamellaria* sp.*Examined material:* (n= 1). St. 4, MZUSP 61775, C15 [1].**Superfamily Naticoidea Forbes, 1838****Family Naticidae Forbes, 1838***Natica* sp.*Examined material:* (n= 2). St. 2, UESB M36, C03 [1]; St.3, UESB M465, C15 [1].*Polinices uberinus* (Orbigny, 1842)*Examined material:* (n= 1). St. 2, UESB M463, C16 [1].*Distribution:* Western Atlantic: North Carolina to Brazil (São Paulo) (Rios 2009).**Superfamily Tonnoidea Suter, 1913****Family Ranellidae Gray, 1854***Cymatium* sp.*Examined material:* (n= 4). St. 5, UESB M365, C14 [2]; St.3, UESB M206, C10 [2].**Family Bursidae Thiele, 1925***Bursa* sp.*Examined material:* (n= 1). St. 7, UESB M386, C15 [1].**Superfamily Cerithiopsoides H. and A. Adams, 1853****Family Cerithiopsidae H. and A. Adams, 1853***Cerithiopsis emersonii* (C.B. Adams, 1838)*Examined material:* (n= 4). St. 5, UESB 134, C10 [1]; St.6, MZUSP 61746, C12 [1]; St.5, MZUSP 62074, C15 [2].*Distribution:* Western Atlantic: North Carolina to Brazil (Santa Catarina) (Rios 2009).*Cerithiopsis* sp.*Examined material:* (n= 2). St. 5, MZUSP 61799, C10 [1]; St.5, MZUSP 61811, C15 [1].**Superfamily Triphoroidea Gray, 1847****Family Triphoridae Gray, 1847***Triphora* sp.*Examined material:* (n= 1). St. 4, MZUSP 61761, C10 [1].**Superfamily Epitonioides S. S. Berry, 1910****Family Epitoniidae S. S. Berry, 1910***Epitonium* sp.*Examined material:* (n= 3). St. 4, MZUSP 61762, C14 [1]; St.1, UESB M100, C06 [1]; St.7, UESB M66, C05 [1].**Superfamily Eulimoidea H. and A. Adams, 1854****Family Eulimidae Risso, 1826***Eulima* sp.*Examined material:* (n= 2). St. 1, MZUSP 61734, C14, [1]; St.1, UESB M74, C05 [1].**Order Neogastropoda Wenz, 1938****Superfamily Muricoidea da Costa, 1776****Family Muricidae Rafinesque, 1815**

Chicoreus carolynae Vokes, 1990

Examined material: (n= 2). St. 5, UESB M27, C03 [1]; St.5, UESB M220, C10 [1].

Distribution: Western Atlantic: Brazil (Espírito Santo) (Rios 2009).

Chicoreus consuelae (A. H. Verril, 1950)

Examined material: (n= 17). St.5, UESB M295, C10 [1]; St.1, UESB M168, C09 [1]; St.5, UESB M129, C06 [2]; St.5, UESB M86, C06 [1]; St.7, UESB M48, C05 [1]; St.5, (UESB M194, C10 [5]; St.6, UESB M210, C10 [1]; St.5, UESB M271, C12 [5].

Distribution: Western Atlantic: Brazil (Pernambuco to Bahia) (Rios 2009).

Chicoreus formosus (Sowerby, 1841)

Examined material: (n= 56). St.5, UESB M360, C14 [7]; St.4, UESB M368, C15 [1]; St.4, UESB M370, C15 [1]; St.4, UESB M371, C14 [1]; St.5, UESB M388, C15 [1]; St.5, UESB M389, C14 [1]; St.5, UESB M24, C03 [5]; St.5, UESB M160, C09 [1]; St.6, UESB M01, C01 [2]; St.6, UESB M146, C08 [1]; St.5, UESB M127, C06 [1]; St.5, UESB M137, C06 [1]; St.5, UESB M232, C07 [7]; St.7, UESB M41, C05 [4]; St.5, UESB M49, C05 [1]; St.5, UESB M202, C10 [1]; St.3, UESB M205, C10 [1]; St.5, UESB M265, C12 [1]; St.5, UESB M266, C12 [1]; St.4, UESB M274, C12 [3].

Distribution: Western Atlantic: Florida to Brazil (Bahia) (Rios 2009).

Chicoreus senegalensis (Gmelin, 1790)

Examined material. (n= 61). St.5, UESB M364, C14 [8]; St.5, UESB M367, C15 [1]; St.5, UESB M387, C15 [2]; St.5, UESB M501, C10 [21]; St.3, UESB M510, C10 [1]; St.6, UESB M511, C10 [1]; St.7, UESB M131, C06 [1]; St.4, UESB M469, C10 [3]; St.4, UESB M217, C10 [2]; St.4, UESB M218, C10 [2]; St.6, UESB M251, C12 [1]; St.4, UESB M273, C12 [2]; St.4, UESB M458, C12 [1]; St.5, UESB M460, C10 [13]; St.5, UESB M461, C10 [2].

Distribution: Western Atlantic: Brazil (Espírito Santo to Santa Catarina) (Rios 2009).

Phyllonotus sp.

Examined material: (n= 1). St. 5, UESB M369, C15 [1].

Favartia cellulosa (Conrad, 1846)

Examined material: (n= 1). St. 5, MZUSP 61731, C14 [1].

Distribution: Western Atlantic: Bermuda, North Carolina to Brazil (Santa Catarina) (Rios 2009).

Urosalpinx sp.

Examined material: (n= 1). St.1, MZUSP 61744, C09 [1].

Family Thaididae Jousseaume, 1888

Morula sp.

Examined material: (n= 1). St.5, MZUSP 61815, C14 [1].

Stramonita haemastoma (Linnaeus, 1767)

Examined material: (n= 1). St.1, UESB 206, C04 [1].

Distribution: Mediterranean Sea; West Africa (Senegal to Congo), Western Atlantic: North Carolina to Uruguay (Rios

2009).

Superfamily Buccinoidea Rafinesque, 1815

Family Buccinidae Rafinesque, 1815

Caducifer swifti (Tryon, 1881)

Examined material: (n= 1). St.7, UESB M378, C15 [1].

Distribution: Western Atlantic: Bermuda, West Indies, Brazil (Rios 2009).

Cantharus auritula (Link, 1807)

Examined material: (n= 1). St.7, UESB M77, C05 [1].

Distribution: Western Atlantic: Bermuda, Florida, West Indies, East Colombia, Venezuela, Brazil (Santa Catarina) (Rios 2009).

Family Columbellidae Swainson, 1840

Columbella mercatoria (Linnaeus, 1759)

Examined material: (n= 30). St.1, UESB 153, C15 [1]; St.1, UESB 195, C14 [1]; St.1, UESB 197, C14 [3]; St.1, UESB 206, C14 [1]; St.1, UESB 221, C11 [1]; St.1, UESB 211, C14 [1]; St.1, UESB 212, C15 [1]; St.1, UESB M315, C12 [1]; St.1, UESB M339, C12 [1]; St.1, UESB M343, C11 [1]; St.1, UESB M344, C12 [2]; St.1, UESB M286, C11 [1]; St.1, UESB M296, C11 [1]; St.1, UESB M33, C03 [1]; St.1, UESB M486, C09 [1]; St.2, UESB M170, C09 [1]; St.2, UESB M175, C09 [1]; St.2, UESB M181, C09 [1]; St.2, UESB M187, C09 [1]; St.1, UESB M124, C06 [3]; St.1, UESB M60, C05 [1]; St.1, UESB M413, C16 [3]; St.1, UESB M441, C15 [1].

Distribution: Western Atlantic: Bermuda, North Carolina to Brazil (São Paulo) (Rios 2009).

Anachis catenata (Sowerby, 1844)

Examined material: (n= 78). St.4, UESB 123, C15 [1]; St.4, UESB 127, C11 [1]; St.4, UESB 139, C11 [1]; St.3, UESB 146, C08 [1]; St.1, UESB 152, C12 [1]; St.4, UESB 166, C12 [1]; St.1, UESB 168, C15 [1]; St.5, UESB 174, C10 [1]; St.1, UESB 193, C12 [1]; St.7, UESB 198, C14 [2]; St.1, UESB 207, C14 [1]; St.1, UESB 209, C10 [2]; St.6, UESB 30, C08 [2]; St.4, UESB 32, C12 [2]; St.5, UESB 35, C14 [3]; St.4, UESB 37, C14 [2]; St.2, UESB, C15 [2]; St.5, UESB 41, C09 [1]; St.2, UESB 44, C08 [1]; St.2, UESB 45, C14 [1]; St.1, UESB 15, C11 [1]; St.4, UESB 22, C11 [1]; St.4, UESB 35, C14 [2]; St.2, UESB 52, C11 [2]; St.1, UESB 55, C08 [1]; St.6, MZUSP 61718, C10 [2]; St.1, MZUSP 61730, C14 [1]; St.4, MZUSP 61745, C10 [3]; St.5, MZUSP 61751, C14 [4]; St.4, MZUSP 61764, C12 [3]; St.8, MZUSP 61770, C10 [1]; St.4, MZUSP 61772, C15 [5]; St.4, MZUSP 61777, C15 [1]; St.6, MZUSP 61783, C10 [1]; St.4, MZUSP 61785, C10 [1]; St.5, MZUSP 62073, C15 [2]; St.1, MZUSP 62081, C11 [1]; St.5, UESB M385, C15 [4]; St.1, UESB M345, C12 [1]; St.7, UESB M13, C02 [1]; St.2, UESB M57, C05 [1]; St.2, UESB M423, C16 [4]; St.4, UESB M426, C16 [2]; St.3, UESB M451, C15 [4]; St.2, UESB M452, C16 [1].

Distribution: Western Atlantic: Bermuda, Florida to Brazil (Santa Catarina) (Rios 2009).

Anachis sertulariarum Orbigny, 1841

Examined material: (n= 6). St. 4, UESB 185, C15 [1]; St.4,

UESB 199, C14 [1]; St.5, UESB M96, C06 [4].

Distribution: Western Atlantic: North Carolina to Argentina (Tierra del Fuego) (Rios 2009).

Anachis sparsa (Reeve, 1859)

Examined material: (n= 18). St.5, UESB M341, C09 [1]; St.1, UESB M276, C09 [1]; St.5, UESB M278, C08 [1]; St.1, UESB M285, C04 [1]; St.1, UESB M290, C12 [1]; St.1, UESB M294, C11 [1]; St.1, UESB M40/2, C03 [1]; St.4, UESB M40/5, C03 [1]; St.2, UESB M178, C09 [2]; St.5, UESB M155, C08 [1]; St.5, UESB M94, C06 [1]; St.1, UESB M98, C06 [4]; St.7, UESB M76, C05 [1]; St.1, UESB M54, C05 [1].

Distribution: Western Atlantic: Florida to Brazil (Santa Catarina) (Rios 2009).

Anachis obesa (C.B. Adams, 1845)

Examined material: (n= 33). St.1, UESB 169, C12 [1]; St.1, UESB 178, C15 [1]; St.7, UESB 194, C14 [2]; St.6, UESB 29, C12 [1]; St.3, UESB 24, C08 [1]; St.6, UESB 101, C06 [1]; St.6, UESB 103, C15 [1]; St.1, MZUSP 62083, C04 [1]; St.1, UESB M302, C12 [2]; St.6, UESB M40/3, C03 [1]; St.7, UESB M154, C08 [1]; St.5, UESB M137, C06 [1]; St.1, UESB M97, C06 [7]; St.7, UESB M103, C06 [1]; St.6, UESB M125, C06 [1]; St.7, UESB M78, C05 [2]; St.2, UESB M59, C05 [1]; St.1, UESB M53, C05 [2]; St.1, UESB M429, C16 [1]; St.8, UESB M436, C15 [1]; St.8, UESB M445, C15 [1]; St.2, UESB M453, C16 [2].

Distribution: Western Atlantic: North Carolina to Brazil (Santa Catarina) (Rios 2009).

Anachis sp.

Examined material: (n= 1). St.1, UESB 57, C08 [1].

Mitrella lunata (Say, 1826)

Examined material: (n= 14). St.1, UESB 220, C11 [1]; St.1, UESB 12, C11 [1]; St.1, UESB 19, C11 [1]; St.1, UESB 43, C12 [1]; St.2, UESB 51, C11 [1]; St.1, UESB 56, C08 [2]; St.1, UESB 68, C12 [1]; St.1, MZUSP 61728, C14 [1]; St.1, MZUSP 61774, C15 [2]; St.1, UESB M313, C05 [1]; St.1, UESB M433, C09 [1]; St.1, UESB M439, C15 [1].

Distribution: Western Atlantic: North Carolina to Brazil (Santa Catarina) (Rios 2009).

Family Nassariidae Iredale, 1916

Nassarius albus (Say, 1826)

Examined material: (n= 4). St.4, UESB 124, C15 [1]; St.1, MZUSP 61813, C15 [1]; St.1, MZUSP 61814, C12 [1]; St.1, UESB 205, C09 [1].

Distribution: Western Atlantic: North Carolina to Brazil (Santa Catarina) (Rios 2009).

Nassarius vibex (Say, 1822)

Examined material: (n= 30). St.7, UESB 151, C06 [1]; St.1, UESB 181, C11 [1]; St.7, UESB M374, C15 [2]; St.7, UESB M376, C15 [6]; St.1, UESB M331, C05 [1]; St.6, UESB M40/9, C03 [1]; St.7, UESB M487, C09 [1]; St.1, UESB M488, C06 [2]; St.7, UESB M172, C09 [1]; St.8, UESB M145, C08 [1]; St.7, UESB M104, C06 [2]; St.1, UESB M111, C06 [1]; St.1, UESB M123, C06 [2]; St.7, UESB M75, C05 [3]; St.7, UESB

M80, C05 [1]; St.7, UESB M233, C07 [2]; St.7, UESB M457, C15 [1]; St.1, UESB M462, C16 [1].

Distribution: Western Atlantic: Florida to Brazil (Santa Catarina) (Rios 2009).

Family Melongenidae Grill, 1867

Pugilina morio (Linnaeus, 1758)

Examined material: (n= 15). St.8, UESB M482, C09 [2]; St.4, UESB M485, C10 [1]; St.7, UESB M504, C10 [1]; St.8, UESB M507, C10 [1]; St.8, UESB M159, C09 [2]; St.7, UESB M130, C06 [2]; St.8, UESB M46, C05 [1]; St.8, UESB M196, C10 [1]; St.7, UESB M223, C10 [1]; St.4, UESB M231, C10 [1]; St.7, UESB M405, C16 [1]; St.3, UESB M406, C16 [1].

Distribution: West Africa, Western Atlantic: Venezuela to Brazil (Santa Catarina) (Rios 2009).

Family Fasciolaridae Gray, 1853

Fusinus brasiliensis (Grabau, 1904)

Examined material: (n= 11). St.5, UESB M26, C03 [1]; St.4, UESB M38, C03 [1]; St.5, UESB M164, C09 [1]; St.4, UESB M167, C09 [3]; St.5, UESB M216, C10 [2]; St.4, UESB M258, C12 [1]; St.5, UESB M269, C12 [1]; St.4, UESB M459, C12 [1].

Distribution: Western Atlantic: Endemic to Northeastern Brazil (Bahia region) (Rios 2009).

Leucozonia nassa (Gmelin, 1791)

Examined material: (n= 12). St.4, UESB 184, C15 [1]; St.5, UESB 213, C16 [1]; St.5, UESB M399, C14 [1]; St.4, UESB M330, C10 [1]; St.4, UESB M06, C02 [3]; St.5, UESB M247, C11 [1]; St.1, UESB M201, C10 [1]; St.3, UESB M209, C10 [2]; St.4, UESB M256, C12 [1].

Distribution: Western Atlantic: Florida to Brazil (Santa Catarina) (Rios 2009).

Family Olividae Latreille, 1825

Oliva circinata Marrat, 1870

Examined material: (n= 1). St.5, UESB M29, C03 [1].

Distribution: Western Atlantic: Northern South America, Brazil (Amapá to Santa Catarina) (Rios, 2009).

Olivella minuta (Link, 1807)

Examined material: (n= 74). St.4, UESB 132, C15 [2]; St.4, UESB 176, C12 [1]; St.5, UESB 38, C14 [1]; St.3, UESB 40, C14 [1]; St.2, UESB 23, C14 [1]; St.1, MZUSP 61779, C15 [3]; St.1, MZUSP 61809, C10 [3]; St.3, MZUSP 62086, C15 [3]; St.3, UESB M319, C08 [1]; St.1, UESB M284, C04 [2]; St.1, UESB M287, C12 [1]; St.1, UESB M291, C12 [1]; St.1, UESB M292, C11 [1]; St.5, UESB M297, C10 [1]; St.3, UESB M299, B04 [1]; St.1, UESB M304, C12 [5]; St.1, UESB M489, C09 [1]; St.1, UESB M496, C09 [2]; St.5, UESB M506, C09 [4]; St.2, UESB M166, C09 [1]; St.1, UESB M174, C09 [1]; St.5, UESB M183, C09 [4]; St.1, UESB M186, C09 [1]; St.1, UESB M92, C06 [23]; St.7, UESB M115, C06 [1]; St.1, UESB M83, C05 [1]; St.7, UESB M84, C05 [4]; St.1, UESB M414, C16 [1]; St.1, UESB M437, C15 [1]; St.2, UESB M455, C16 [1].

Distribution: Western Atlantic: Texas to Brazil (Santa Catarina) (Rios 2009).

Olivella sp.

Examined material: (n= 9). St.7, UESB 122, C15 [2]; St.5, UESB 133, C10 [2]; St.5, UESB 31, C14 [1]; St.5, UESB 33, C14 [1]; St.4, UESB 92, C14 [1]; St.7, MZUSP 61804, C14 [2].

Family Marginellidae Fleming, 1828*Marginella* sp.

Examined material: (n= 2). St. 4, MZUSP 61723, C12 [1]; St.5, MZUSP 61729, C10 [1].

Volvarina sp.

Examined material: (n= 14). St.4, MZUSP 61720, C14 [4]; St.5, MZUSP 61753, C15 [1]; St.4, MZUSP 61756, C12 [1]; St.5, MZUSP 61765, C10 [2]; St.4, MZUSP 61771, C14 [3]; St.5, MZUSP 62071, C15 [2]; St.4, MZUSP 62095, C12 [1].

Granulina ovuliformis (Orbigny, 1841)

Examined material: (n= 4). St.1, MZUSP 61725, C14 [1]; St.1, MZUSP 62094, C11 [3].

Distribution: Western Atlantic: North Carolina to Uruguay (Rios 2009).

Family Costellariidae MacDonald, 1860*Vexillum* sp.

Examined material: (n= 1). St.1, MZUSP 61789, C15 [1].

Superfamily Conoidea Rafinesque, 1815**Family Conidae Rafinesque, 1815***Conus jaspideus* Gmelin, 1791

Examined material: (n= 16). St. 4, UESB 143, C11 [1]; St.5, UESB 155, C14 [1]; St.5, UESB 27, C14 [1]; St.3, UESB 28, C08 [1]; St.4, UESB 93, C14 [1]; St.4, UESB 94, C14 [1]; St.5, UESB M34, C03 [2]; St.5, UESB M40/8, C03 [1]; St.4, UESB M40/10, C03 [1]; St.5, UESB M491, C10 [2]; St.7, UESB M117, C06 [1]; St.3, UESB M56, C05 [1]; St.5, UESB M213, C10 [2].

Distribution: Western Atlantic: North Carolina to Brazil (Rio de Janeiro) (Rios 2009).

Family Turridae Swainson, 1840

Examined material: (n= 5). St.1, UESB M335, C05 [1]; St.1, UESB M112, C06 [2]; St.4, UESB M72, C05 [1]; St.7, UESB M238, C07 [1].

Drillia sp.

Examined material: (n= 6). St.1, UESB 136, C09 [1]; St.5, UESB 34, C14 [1]; St.5, MZUSP 61752, C14 [1]; St.1, MZUSP 61812, C10 [1]; St.5, UESB M108, C06 [1]; St.4, UESB M427, C16 [1].

Leptadrillia sp.

Examined material: (n= 1). St.1, UESB M403, C12 [1].

Polystira albida (Perry, 1811)

Examined material: (n= 20). St.5, UESB M363, C14 [4]; St.3,

UESB M481, C10 [2]; St.4, UESB M505, C10 [2]; St.5, UESB M508, C10 [4]; St.5, UESB M120, C06 [1]; St.4, UESB M203, C10 [2]; St.5, UESB M225, C10 [4]; St.5, UESB M407, C16 [1].

Distribution: Western Atlantic: Florida to Brazil (Amapá) (Rios 2009).

Polystira florencae Bartsch, 1934

Examined material: (n= 15). St.7, UESB M347, C09 [1]; St.5, UESB M362, C14 [4]; St.5, UESB M21, C03 [2]; St.7, UESB M25, C03 [1]; St.5, UESB M143, C08 [1]; St.5, UESB M226, C10 [1]; St.4, UESB M230, C10 [2]; St.4, UESB M255, C12 [2]; St.5, UESB M257, C12 [1].

Distribution: Western Atlantic: North Carolina to Brazil (Rio de Janeiro) (Rios 2009).

Pilsbryspira sp.

Examined material: (n= 1). St.5, UESB M107, C06 [1].

Mangelia sp.

Examined material: (n= 5). St. 5, UESB 36, C14 [1]; St.1, UESB 109, C12 [2]; St.5, UESB 111, C09 [1]; St.1, MZUSP 62084, C04 [1].

Cryoturris sp.

Examined material: (n= 4). St. 4, MZUSP 61748, C15 [1]; St.1, MZUSP 61769, C14 [1]; St.4. MZUSP 61800, C14 [1]; St.4, MZUSP 61801, C15 [1].

Pyrgocythara sp.

Examined material: (n= 1). St. 3, MZUSP 62085, C15 [1].

Family Terebridae Mörch, 1852*Terebra* sp.

Examined material: (n= 7). St.1, UESB 148, C10 [1]; St.4, MZUSP 61810, C15 [2]; St.4, MZUSP 62096, C12 [1]; St.5, UESB M380, C14 [3].

Hastula hastata (Gmelin, 1791)

Examined material: (n= 1). St.1, UESB 7, C12 [1].

Distribution: Western Atlantic: Florida to Brazil (Santa Catarina) (Rios 2009).

Subclass Heterobranchia Gray, 1840**Superorder Allogastropoda Haszprunar, 1985****Order Heterostropha Fischer, 1885****Superfamily Architectonicoidea Gray, 1850****Family Architectonicidae Gray, 1850***Architectonica nobilis* Roding, 1798

Examined material. (n= 1). St. 6, UESB M39, C03 [1].

Distribution: Eastern Pacific: Mexico (Baja California) to Peru; Western Atlantic: North Carolina to Brazil (Rio Grande do Sul) (Rios 2009).

Superfamily Pyramidelloidea Gray, 1840

Family Pyramidellidae Gray, 1840*Odostomia* sp.*Examined material:* (n= 1). St. 3, MZUSP 61740, C11 [1].*Chrysallida* sp.*Examined material:* (n= 2). St.1 UESB 13, C11 [1]; St.6, UESB 104, C15 [1].*Turbonilla* sp.*Examined material:* (n= 4). St.1, MZUSP 61724, C12 [1]; St.4, MZUSP 61786, C14 [1]; St.3, MZUSP 61788, C11 [1]; St.5, MZUSP 61794, C10 [1].*Iselica anomala* (C. B. Adams, 1850)*Examined material:* (n= 2). St.1, UESB 196, C14 [1]; St.4, MZUSP 61787, C15 [1].*Distribution:* Western Atlantic: Florida to Uruguay (Rios 2009).*Iselica* sp.*Examined material:* (n= 2). St.1, MZUSP 61726, C15 [2].**Subclass Opisthobranchia** Milne Edwards, 1848**Order Cephalaspidea** P. Fischer, 1883**Superfamily Philinoidea** Gray, 1850**Family Cylichnidae** H. and A. Adams, 1854*Cylichna* sp.*Examined material:* (n= 3). St.7, UESB 183, C10 [1]; St.4, UESB 204, C14 [1]; St.5, MZUSP 61754, C14 [1].**Superfamily Haminoeidea** Pilsbry, 1875**Family Haminoeidae** Pilsbry, 1895*Atys* sp.*Examined material:* (n= 9). St.1, UESB M323, C10 [1]; St.1, UESB M329, C06 [1]; St.1, UESB M281, C04 [3]; St.1, UESB M288, C12 [1]; St.1, UESB M303, C12 [3].**Superfamily Bulloidea** Lamarck, 1801**Family Bullidae** Rafinesque, 1815*Bulla occidentalis* (A. Adams, 1850)*Examined material:* (n= 28). St.7, UESB M352, C15 [5]; St.5, UESB M22, C03 [3]; St.2, UESB M09, C02 [2]; St.7, UESB M135, C06 [1]; St.4, UESB M472, C10 [7]; St.1, UESB M473, C11 [1]; St.1, UESB M243, C11 [1]; St.4, UESB M52, C05 [1]; St.4, UESB M224, C10 [7].*Distribution:* Western Atlantic: North Carolina to Uruguay (Rios 2009).**Order Notaspidea** Fischer, 1883**Family Aplysiidae** Lamarck, 1809*Aplysia juliana* Quoy and Gaimard, 1823*Examined material:* (n= 28). St.1, UESB 59, C12 [2]; St.1, UESB 72, C04 [1]; St.1, UESB 77, C12 [12]; St.1, UESB 87, C12 [1]; St.1, MZUSP 57999, C06 [8]; St.1, MZUSP 58000, C06 [2]; St.2, MZUSP 58002, C06 [1]; St.6, MZUSP 58003, C06 [1].*Distribution:* Western Atlantic: Florida to Brazil (São Paulo) (Rios 2009).*Aplysia dactylomella* Rang, 1828*Examined material:* (n= 36). St.1, UESB 58, C12 [1]; St.1, UESB 73, C04 [26]; St.2, MZUSP 58001, C06 [2]; St.4, UESB M241, C11 [2]; St.1, UESB M195, C10 [2]; St.1, UESB M207, C10 [1]; St.1, UESB M208, C10 [2].*Distribution:* Cosmopolitan in warm waters, Brazil (Ceará to São Paulo) (Rios 2009).*Aplysia parvula* Morch, 1863*Examined material:* (n= 1). St.3, MZUSP 58004, C06 [1].*Distribution:* Worldwide in warm waters. Brazil (Pernambuco to Bahia) (Rios 2009), Atol das Rocas (Gomes *et al.* 2006).*Aplysia* sp.*Examined material:* (n= 24). St.1, UESB 88, C11 [2]; St.1, MZUSP 62595, C04 [15]; St.1, UESB M382, C10 [7].**Order Nudibranchia** Blainville, 1814**Superfamily Eudoridoidea** Odhner**Family Chromodorididae** Berg, 1891*Cadlina rumia* Marcus, 1955*Examined material:* (n= 1). St.5, MZUSP 62598, C10 [1].*Distribution:* Western Atlantic: Florida to Brazil (São Paulo) (Domingues *et al.* 2006)**Superfamily Dendronotoidea** Odhner, 1936**Family Tritoniidea** Menke, 1828*Tritonia* sp.*Examined material:* (n= 1). St.5, MZUSP 62597, C11 [1].**Family Bornellidae** Fischer, 1883*Bornella calcarata* Mörch, 1863*Examined material:* (n= 1). St.2, UESB M11, C02 [1].*Distribution:* Western Atlantic: Panamá to Brazil (Bahia) (Rios 2009).

Among the reports related to taxonomy and ecology of gastropod mollusks in northeastern Brazil, we should point out the study carried out by Absalão (2006) in the Abrolhos bank, who recorded a total of 238 species collected in 39 points, and the mollusk inventory from the eastern coast of Ceará state (Ministério do Meio Ambiente 2006), with records of 14 species of gastropods from 13 families.

The Camamu Bay in the state of Bahia has been poorly studied so far, especially with regards to the malacofauna. Amongst the 94 species of gastropods recorded in the present work, all are the first occurrence to Camamu Bay and four to the state of Bahia (genera *Littoridina*, *Morula* and the species *Cadlina rumia* and *Polystira albida*).

The present study represents a significant contribution to the taxonomic knowledge of gastropod mollusks in the coast of Bahia, highlighting the necessity of further studies about the ecology and spatial distribution of the benthic macrofauna as a whole along the region.

LITERATURE CITED

- Absalão, R.S. 2006. Mollusca recorded during the Abrolhos RAP survey; p. 126-133 *In* G.F. Dutra, G.R. Allen, T. Werner and S.A. McKenna (ed.). *Conservation International Rapid Assessment Program 38 – A Rapid Marine Biodiversity Assessment of the Abrolhos Bank, Bahia, Brazil*. Washington: Conservation International.
- Faulkner, D.J. 1994. Marine Natural Products. *Natural Product Reports* 11: 355-394.
- Gray, J.S. 2001. Marine diversity: the paradigms in patterns of species richness examined. *Scientia Marina* 65(2): 41-56.
- Gomes, R.S., P.M.S. Costa, J.C. Monteiro, A.C.S. Coelho and N.C. Salgado. 2006. Moluscos das Ilhas Oceânicas brasileiras; p. 179-198. *In* R.J.V. Alves and J.W.A. Castro (org.). *Ilhas Oceânicas brasileiras da pesquisa ao manejo*. Rio de Janeiro: Ministério do Meio Ambiente.
- Hamed, M. and A.M., Emara. 2006. Marine mollusks as biomonitors for heavy metal levels in the Gulf of Suez, Red Sea. *Journal of Marine Systems* 60: 220-234.
- Koide, M., D.S. Lee and E.D. Goldberg. 1982. Metal and transuranic records in mussel shells, byssal threads and tissues. *Estuarine Coastal and Shelf Science* 15: 679-695.
- Lavrado, H.P. 2006. Caracterização do ambiente e da comunidade bentônica; p. 19-64 *In* H.P. Lavrado and B.L. Ignacio (ed.). *Biodiversidade Bentônica da Costa Central da Zona Econômica Exclusiva Brasileira*. Rio de Janeiro: Museu Nacional.
- Manzo, E.M., L. Ciavatta, M. Gavagnin, R. Puliti, E. Mollo, Y.W. Guo., C.A. Mattia, L. Mazzarella and G. Cimino. 2005. Structure and absolute stereochemistry of novel C15-halogenated acetogenins from the anaspidean mollusk *Aplysia dactylomela*. *Tetrahedro* 61: 7456-7460.
- Ministério do Meio Ambiente. 2002. *Biodiversidade Brasileira. Avaliação e identificação de áreas e ações prioritárias para a conservação, utilização sustentável e repartição dos benefícios da biodiversidade nos biomas brasileiros*. Brasília: MMA/SBF. 404 p.
- Ministério do Meio Ambiente. 2006. *Biota Marinha da Costa Oeste do Ceará*. Série Biodiversidade 24. Brasília: MMA/SBF. 248 p.
- Oliveira, B.M. 2006. *Conus* Peptides: Biodiversity-based Discovery and Exogenomics. *The Journal of Biological Chemistry* 281(42): 31173-31177.
- Oliveira, O.M.C., A.F.S. Queiroz, R.N. Damasceno, V.M.S. Santos and U.R. Freitas. 1998. Caracterização geoambiental de zonas de manguezais da baía de Camamu-BA: subsídios para um estudo ambiental sistemático. *REM: Revista Escola de Minas* 55(3): 42-46.
- Oliveira, O.M.C., F.S. Queiroz, R.N. Damasceno, V.M.S. Santos and U.R. Freitas. 2002. Estudo mineracológico do sedimento de manguezal da baía de Camamu-BA. *Rem: Revista Escola de Minas* 55(2):147-151.
- Rios, E.C. 2009. *Compendium of Brazilian Sea Shells*. Rio Grande: Evangraf. 676 p.
- Silva, C.A.R., B.D. Smith and P.S. Rainbow. 2006. Comparative biomonitors of coastal trace metal contamination in tropical South America (N. Brazil). *Marine Environmental Research* 61:439-455.
- Simone, L.R.L. 1999. Filo Mollusca; p. 129-136 *In* A.E. Migotto and C.G. Tiago (ed.). *Invertebrados Marinhos, vol 3, Biodiversidade do Estado de São Paulo, Brasil: síntese do conhecimento ao final do século XX*. São Paulo: Fapesp.
- Szefer, P. 1986. Some metals in benthic invertebrates in Gdansk Bay. *Marine Pollution Bulletin* 17(11): 503-507.

RECEIVED: December 2010

LAST REVISED: April 2011

ACCEPTED: April 2011

PUBLISHED ONLINE: June 2011

EDITORIAL RESPONSIBILITY: Luis Ernesto Arruda Bezerra